

Applicant : Gregg D. Wilensky
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Attorney's Docket No.: 07844-484001 / P448

REMARKS

Claims 1-98 are pending. Claims 1, 20, 49, 50, 51 and 98 are independent claims. Claims 1-4, 7-9, 19, 20, 38, 49-51, 69 and 87 stand rejected under 35 U.S.C. Section 102(e) as being anticipated by U.S. Patent No. 6,556,704 B1 to Chen ("Chen"). Claims 1-9, 19, 49 and 50 stand rejected under 35 U.S.C. Section 102(e) as being anticipated by U.S. Patent No. 6,128,046 to Totsuka et al. ("Totsuka"). Claims 1-2, 19-21, 38, 49-52, 69, 87 and 98 stand rejected under 35 U.S.C. Section 102(e) as being anticipated by U.S. Patent No. 5,912,994 to Norton et al. ("Norton"). Claims 1-98 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,429,875 B1 to Pettigrew et al. ("Pettigrew"). Applicant has amended claims 1, 14, 20, 33, 49, 50, 51, 64, 82, and 98. Applicant respectfully requests reconsideration in view of the amendments and the following remarks.

SECTION 102 REJECTIONS

Claim 1 stands rejected as being anticipated by Chen, Totsuka, Norton, and Pettigrew. Applicant has amended claim 1, which now recites:

"[R]eceiving a first input defining a first border region that includes a border between a foreground portion and a background portion of a first digital image, the first digital image being one of a sequence of digital images defining a digital video, the first border region further including only a part of the foreground portion and only a part of the background portion;

receiving a second input defining a second border region that includes the border in a second digital image, the second digital image being another one of the sequence of digital images, the second border region further including only a part of the foreground portion and only a part of the background portion;

interpolating between the first and second border regions to define an intermediary border region for an image intermediary in the sequence to the first and second digital images; and

using the first, second, and intermediary border regions for masking the foreground portion from the background portion in the digital video."

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As can be seen, claim 1 requires an interpolation between border regions that are defined for different digital images of a sequence of digital images that define a video. Applicant respectfully submits that none of the cited references discloses or suggests such an interpolation.

Chen does not disclose or suggest Applicant's claimed interpolation because Chen fails to disclose or suggest a sequence of digital images that define a video, as required by claim 1. Indeed, Chen does not even contemplate such a sequence. Chen's depth interpolation is performed on digital images (i.e., the top and bottom images), which are, however, not part of a sequence of digital images that define a video. Chen's top and bottom images are, in fact, images taken at the same point in time from different angles. Hence, their sequence (if any exists) does not define a video. For at least this reason, Chen does not anticipate or render obvious claim 1 and claims 2-19, which depend from claim 1.

Totsuka does not disclose or suggest Applicant's claimed interpolation for the reasons set forth below. Totsuka discloses frames (i.e., t1 and t2) of a video, but only does so to demonstrate the notion of motion blur. *See* FIGs. 3A and 3B; col. 4, line 56, col. 2, line 58 – col. 3, line 22. Totsuka is silent on interpolating between its frames, which, as can be seen, does not even include border regions, which they must have to anticipate or render obvious claim 1. The Totsuka interpolation to which the Examiner refers is one calculated between the key signals of the P1 and P2 close curves, which are curves on the same picture frame. *See* FIGs. 28B and 29; col. 23, line 63 – col. 24, line 12. Like in Chen, the interpolation here is not between different digital images of a sequence of digital images that define a video, as would be required to anticipate or render obvious claim 1. For at least the above reasons, Totsuka does not anticipate or render obvious claim 1 and claims 2-19, which depend from claim 1.

Norton does not disclose or suggest Applicant's claimed interpolation because Norton fails to disclose Applicant's claimed border regions. As can be seen by the plain language of claim 1, the border region is a region that includes a border between a foreground portion and a background portion of a digital image, only a part of the foreground portion, and only a part of the background portion. FIGs. 3a and 3b of Applicant's specification show examples of border regions. Norton fails to disclose or suggest such regions. Norton describes defining and

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interpolating color masks for different frames. Norton suggests that the color masks are defined by specifying the shape, position, and color recipe of all the polygonal masks, but is otherwise silent on how masks are defined. Applicant respectfully submits that, without more, Norton's description of its color masks does not disclose Applicant's claimed border region because polygons are significantly different than Applicant's border region. As Norton does not disclose Applicant's claimed border regions, Norton cannot disclose Applicant's interpolation, which is performed on the border regions. For at least the above reasons, Norton does not anticipate or render obvious claim 1 and claims 2-19, which depend from claim 1.

Pettigrew does not disclose or suggest Applicant's claimed interpolation for the reasons set forth below. The interpolation performed in Pettigrew's process is between color transitions that are on the same image frame. In fact, Pettigrew's process considers only one frame at a time. See Figure 2 (showing that the frames are selected from processing one at a time). As such, Pettigrew's process cannot interpolate between frames, which is required to anticipate or render obvious claim 1. For at least this reason, Pettigrew, like the other cited references, does not anticipate or render obvious claim 1 and claims 2-19, which depend from claim 1. Accordingly, claims 1-19 are in condition for allowance.

Claim 20 stands rejected as being anticipated by Chen, Totsuka, Norton, and Pettigrew. Applicant has amended claim 20, which now recites "receiving an input defining an initial border region that includes a border between a foreground portion and a background portion of an initial digital image, the initial digital image being one of a sequence of digital images that define a digital video, the initial border region further including only a part of the foreground portion and only a part of the background portion." For reasons similar to those discussed above, none of the cited references discloses or suggests the elements of claim 20. Accordingly, claim 20 and claims 21-48, which depend from claim 20, are in condition for allowance.

Claim 49 stands rejected as being anticipated by Chen, Totsuka, Norton, and Pettigrew. Applicant has amended claim 20, which now recites "receiving a first user input defining a first border region that includes a border between an object and a background of a first digital image, the first digital image being one of a sequence of digital images that define a digital video, the

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first border region further including only a part of the object and only a part of the background.” For reasons similar to those discussed above, none of the cited references discloses or suggests the elements of claim 49. Accordingly, claim 49 is in condition for allowance.

Claim 50 stands rejected as being anticipated by Chen, Totsuka, Norton, and Pettigrew. Applicant has amended claim 50, which now recites “receive a first input defining a first border region that includes a border between a foreground portion and a background portion of a first digital image, the first digital image being one of a sequence of digital images that define a digital video, the first border region further including only a part of the foreground portion and only a part of the background portion.” For reasons similar to those discussed above, none of the cited references discloses or suggests the elements of claim 50. Accordingly, claim 50 and claims 52-69, which depend from claim 50, are in condition for allowance.

Claim 51 stands rejected as being anticipated by Chen, Totsuka, Norton, and Pettigrew. Applicant has amended claim 51, which now recites “receive an input defining an initial border region that includes a border between a foreground portion and a background portion of an initial digital image, the initial digital image being one of a sequence of digital images that define a digital video, the initial border region further including only a part of the foreground portion and only a part of the background portion.” For reasons similar to those discussed above, none of the cited references discloses or suggests the elements of claim 51. Accordingly, claim 51 and claims 70-97, which depend from claim 51, are in condition for allowance.

Claim 98 stands rejected as being anticipated by Chen, Totsuka, Norton, and Pettigrew. Applicant has amended claim 98, which now recites “receive a first user input defining a first border region that includes a border between an object and a background of a first digital image, the first digital image being one of a sequence of digital images that define a digital video, the first border region further including only a part of the object and only a part of the background.” For reasons similar to those discussed above, none of the cited references discloses or suggests the elements of claim 98. Accordingly, claim 98 is in condition for allowance.

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CONCLUSION


Applicant respectfully requests that all the pending claims be allowed. Please apply a charge of \$110 for a one month extension of time and any other appropriate charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: July 22, 2004

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